

REMARKS

By the above amendment, the specification has been amended to update the patented status of the parent and grandparent applications. Additionally, claims 19 and 20 have been canceled without prejudice or disclaimer of the subject matter thereof and the independent and dependent claims, where appropriate, have been amended to refer to red light rather than yellow light, noting that as described at page 40 of the specification, it is important to maintain the relationship of the transmittance between the three wavelengths of the colors R, G and B to a predetermine state, which predetermined state refers to a state wherein the transmittance in the wavelength of the longest wave among the spectra corresponding to blue of the emission spectra of the back-light is always larger than that in the wavelengths 545 nm (green) and 630 nm (red). Thus, the claims have been amended to refer to blue, green and red light with claim 4, for example, reciting the feature that the range of wavelengths designated for blue light corresponds to 400 nm to 500 nm, the range of wavelengths designated for a green light corresponds to 500 nm to 600 nm, and the range of wavelengths designated for red light corresponds to 600 nm to 700 nm.

Applicants note that an interview with the Examiner may be helpful in resolving any outstanding issues, and the Examiner is invited to contact the undersigned attorney to schedule an interview when taking this application up for action.

As to the rejection of claims 3 - 20 under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Asano et al (5,048,933), such rejections are traversed insofar as they are applicable to the present claims. As to the requirements to support a rejection under 35 USC 102, reference is made

to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

With regard to the requirements to support a rejection under 35 USC 103, reference is made to the decision of As to the requirements to support a rejection under 35 USC 103, reference is made to the decision of In re Fine, 5 USPQ 2d 1596 (Fed. Cir. 1988), wherein the court pointed out that the PTO has the burden under '103 to establish a prima facie case of obviousness and can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. As noted by the court, whether a particular combination might be "obvious to try" is not a legitimate test of patentability and obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. As further noted by the court, one cannot use hindsight reconstruction

to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

Furthermore, such requirements have been clarified in the recent decision of In re Lee, 61 USPQ 2d 1430 (Fed. Cir. 2002) wherein the court in reversing an obviousness rejection indicated that deficiencies of the cited references cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge".

The court pointed out:

The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher."... Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

In setting for the rejection based upon Asano, the Examiner indicates that the claims are substantially written to a light source in a double refraction LCD (by refringance mode) with a higher transmittance for blue than green than red. The Examiner contends that Asano discloses an STN device, apparently with the claimed relationship, with the Examiner setting forth different theories. It is noted that the Examiner recognizes differences between the disclosure of Asano and the claimed invention. More particularly, the Examiner states:

There is some difference in the claim language however, from the discussion of Asano as the claims indicate the highest wavelength of the backlight for blue compared to that for green, etc., however, the result appear to be the same as the Gooch and Tarry curves are smooth, so blue as compared to the highest wavelength of blue should

be substantially the same and provide a sufficient basis for a rejection under 102/103 to shift the burden to applicant to show an unobvious difference. (emphasis added).

Applicants submit that the Examiner has made assumptions which are not proper, and fails to give proper consideration to the claim language, as will become clear from the following discussion.

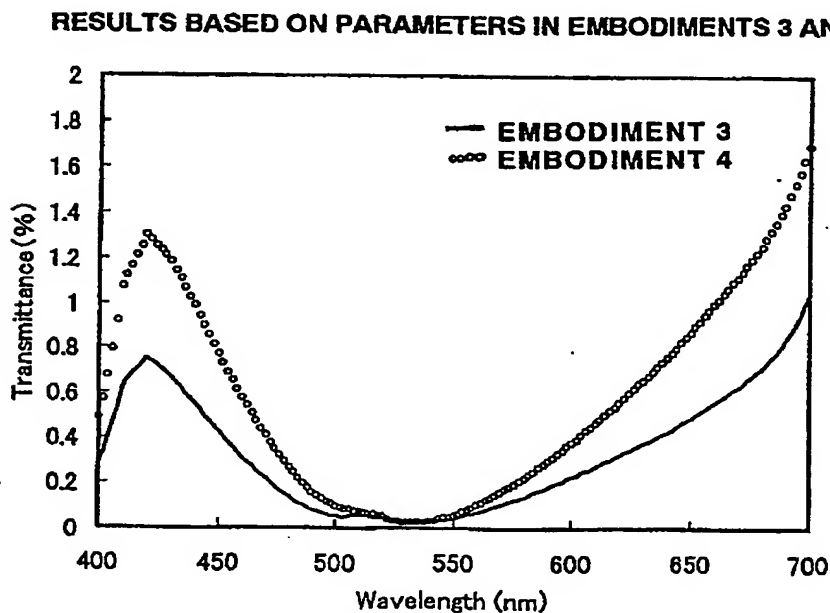
Turning first to the features of claim 3, for example, there is recited a requirement for satisfying the equation $x > y > z$, where "x" equals a value of the transmittance in the liquid crystal panel at a wavelength which corresponds to a longest wavelength in the range of wavelengths designated for blue light; "y" equals a value of a transmittance at a wavelength which corresponds to a maximum value of the intensity in a range of wavelengths designated for green light; and "z" equals a value of the transmittance at a wavelength which corresponds to a maximum value of the intensity in a range of wavelengths designated for red light; with dependent claim 4 reciting the range of wavelengths for blue light being 400 nm to 500 nm, the range of wavelengths for green light being 500 nm to 600 nm, and the range of wavelengths for red light being 600 nm to 700 nm.

Although the Examiner does not refer to Fig. 10 of Asano and looking to the ON curve of Fig. 10 thereof, column 8, line 67 to column 9, line 2 of Asano defines the wavelength region for a red light as about 580 to 800 nm, for green light about 480 to 580 nm and for blue light about 400 to 480 nm, applicants note that it is essentially impossible to determine transmittance values from the ON curve in the various wavelength regions from Fig. 10 of Asano. However, it may be considered that the transmittance value is greater in the blue and red regions with respect to the green region. However, applicants note that utilizing the wavelengths as given by Asano, of 400 to 480 nm representing the wavelength range for blue light and 580 to

800 nm representing the wavelength range for red light, and looking to a value of the transmittance at a wavelength which corresponds to a longest wavelength in the range of wavelengths designated for blue light, which would necessarily be the value of the transmittance at about 480 nm in Fig. 10 of Asano, as compared with a value of the transmittance at a wavelength which corresponds to a maximum value of the intensity in the range of wavelengths designated for red light, which has a wavelength range of about 480 to 800 nm in Fig. 10 of Asano, and recognizing that the transmittance value is increasing in the region of 700 nm in Asano, it is apparent that a wavelength which corresponds to the maximum value of the intensity in the range of wavelengths for red light would be in excess of 700 nm in Asano. Thus, contrary to the Examiner's contention, applicants submit that in Asano, the value of transmittance at a wavelength which corresponds to a maximum value of the intensity in the range of wavelengths designated for red light is greater than a value of the transmittance at a wavelength which corresponds to a maximum value of the intensity in the range of wavelengths designated for green light, and additionally is greater than a value of the transmittance at a wavelength which corresponds to a longest wavelength in the range of wavelengths designated for blue light. Thus, utilizing the relationship as recited in claim 3 of " $x > y > z$ ", Asano discloses and teaches $z > x > y$, which is not the claim relationship. Accordingly, applicants submit that contrary to the position set forth by the Examiner, Asano does not disclose in the sense of 35 USC 102 or teach in the sense of 35 USC 103, the recited relationships of the independent and dependent claims of this application.

As noted above, it is difficult to determine the transmittance in the various wavelength regions and therefore, applicants have conducted simulation studies on an LCD master based on the parameters given in Examples 3 and 4 in Table 1 at

column 15 and 16 of Asano. Utilizing such parameters, the following results are obtained for the embodiment of Example 3 and the embodiment of Example 4.



Applicants submit that it is clearly illustrated that a value of transmittance at a wavelength which corresponds to a longest wavelength in the range of wavelengths designated for blue light, which in accordance with the disclosure of Asano is in a wavelength region of 400 to 480 nm, with 480 nm being the longest wavelength in the range of wavelengths designated for blue light, and is substantially smaller than any value of transmittance in the range of wavelengths designated for red light, which is the wavelength region of 580 to 800 nm in Asano, irrespective of the fact that claim 3, for example indicates that the value of transmittance is selected as the value at a wavelength which corresponds to a maximum value of the intensity in the

range of wavelengths designated for red light. Thus, applicants have met the burden of showing the impropriety of the rejection as set forth by the Examiner.

With respect to the other independent claims of this application, applicants note that independent claim 7 recites the same relationship of $x > y > z$, as in claim 3 whereas independent claims 11 and 15 only recite the relationship of $x > z$, which as pointed out above, Asano has the opposite relationship that $z > x$. Furthermore, as noted above, claims 3 and 7 and therewith the dependent claims also recite the relationship that $y > z$, and Asano also not provide this relationship, but rather that $z > y$. As such, applicants submit that contrary to the position set forth by the Examiner, Asano does not disclose or teach the claimed invention as set forth in claims 3 - 18, as now present in this application.

Additionally, applicants submit that the Examiner has made an incorrect assumption in apparent referring to the Gooch and Tarry curves in relation to the curves of Asano. Applicants submit that discloses a liquid crystal display apparatus of the SEB mode. On the other hand, Gooch and Tarry curves are based on a spectral property in TN mode, which is not applicable to the SEB mode. In the SEB mode, the curve has such a shape that shifting from the maximum value of the transmittance to the longer wavelength region brings the transmittance again to being increased in a region of 700 nm for such a state that is at least in the medium level. However, as pointed out above, irrespective of such feature as seen from the ON curve in Fig. 10 of Asano, such does not relate to the claimed invention. As such, applicants submit that the Examiner has made improper assumptions and, irrespective of the assumptions made, applicants submit that Asano does not disclose or teach the claimed invention as set forth in claims 3 - 18 in the sense of 35 USC 102 or 35 USC 103 and all claims should be considered allowable thereof.

Again, the Examiner is invited to contact the undersigned attorney to schedule an interview, if deemed necessary.

In view of the above amendments and remarks, applicants submit that all claims should now be considered to be in condition for allowance and issuance of an action of favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 503.34972CX2), and please credit any excess fees to such deposit account.

Respectfully submitted,

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